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Aude Prieur-Blanc

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/068,232  
Filing Date: February 06, 2002  
Appellant(s): PRIEUR-BLANC ET AL.

**MAILED**  
**NOV 28 2007**  
**GROUP 1700**

Michael R. Krawzsenek  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 1, 2007 appealing from the Office action mailed June 15, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct with respect to the art rejection. However, the 112 rejection has been dropped and hence will not be addressed in this answer.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,376,751

DUCHANE

3-1983

Applicant's own admitted prior art as set forth at page 1, line 7 through page 2, line 11 of the instant specification.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art as set forth at page 1, line 7 through page 2, line 11 of the instant specification in view of Duchane (see col. 1, lines 40-50; col. 2, lines 45-55).

The admitted prior art teaches that the instant successive steps of grinding, fine grinding and polishing are well known in the art and indeed applied to optical articles such as lenses. Essentially, the admitted prior art fails to teach that the final mechanical steps of the grinding—ie, the fine grinding and/or polishing—would be replaced with an attack

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of the principal surface of the article with a solvent or mixture of organic solvents “and not with a non-solvent” of the thermoplastic material making up the lens. Duchane discloses that it is very difficult to produce “super-smooth surface finishes on polymers by mechanical means” (see col. 1, lines 47-48) and is directed to replacing a “diamond knife machining” (see col. 2, line 53) with a solvent treatment. Hence it would have been obvious to one of ordinary skill in the art at the time of invention to have employed a solvent as taught by Duchane in lieu of the fine grinding or polishing steps taught in the admitted prior art. Duchane obtains the best results –ie, “super-smooth surfaces— by using a treatment involving a solvent and a non-solvent. However, it is submitted that one of ordinary skill in the art would understand from the disclosure of Duchane **as a whole** that solvents or mixtures of solvents **without non-solvents** would also be effective in smoothing the surface of plastic articles, albeit not necessarily as effective as the inventive method of Duchane. For instance, see Control Example 1 (column 8) which teaches that a solvent alone affords some degree of surface smoothing and scratch removal although the solvent evaporation presumably leads to undulations on the surface. Duchane goes on to say that “it **appears** that a nonsolvent is necessary to achieve a super-smooth surface”.-ie, the patentee is not even clear that the non-solvent is necessary. If something is not necessary, then it is certainly obvious to do without it. More importantly, it should be noted that the instant claims **do not recite exactly what degree of smoothness need be obtained in the instant process**. The solvent treatment alone in Duchane is sufficient to achieve a certain degree of smoothness and the instant claims set forth no more than this. Duchane keeps the treatment bath in

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motion and one of ordinary skill in the art would have found centrifuging to be an obvious expedient over continuously circulating the bath, as either would provide a constant replenishing of the treating fluid on the principal surface during the smoothing. Note also that it is generally well known to spread fluids across a surface by centrifugation, and such would be an obvious method by which a fluid would be caused to contact a surface. Duchane (see Control Example 3) teaches exposing a plastic article to vapor from a boiling solvent and hence attack by vapor is taught in the reference. To combine both centrifuging and vapor phase treatment would have been obvious for a synergistic effect. Concerning the thermoplastic material and solvent, see Duchane, column 6, lines 12-15.

#### **(10) Response to Argument**

Appellant submits that the combination of art fails to disclose every element of the instant invention, at least with respect to claim 18 since Duchane is believed to not disclose “and not with a non-solvent” concerning the principal surface attack. However, as already noted, Control Example 1 of Duchane does indeed teach attack with a solvent only, and such produces at least a macroscopically smooth surface. Again, the instant claims are silent with respect to exactly what extent the instant principal surface is smoothed. The instant optical article could very well be one that does not require an extremely smooth surface and perhaps the degree of smoothing obtained by the solvent only of Duchane would be acceptable. As noted by appellant, the very disclosure of Duchane—ie, “it **appears** that a non-solvent is necessary—would indicate that perhaps

such is not necessary, but only "appears" to be necessary. Also, attention is drawn to Control Example 2, in which a solvent and non-solvent were used and the surface was not "super-smooth". Hence, even a combination of solvent and non-solvent might not be in and of itself sufficient to obtain the "super-smooth" surface of Duchane that appellant appears to believe the instant process should have. Again, the lack of any recitation concerning exactly how smooth the instant surface need be renders this line of argument not in point. Comments directed to the Ra value are also not in point since this is not claimed.

Comments that Duchane teaches away from the instant "and not with a non-solvent" limitation are noted but are not persuasive. Certainly, the reference teaches that in general (however, again see Control Example 2) a non-solvent is necessary to obtain a "super-smooth" surface, but appellant has not defined what the instant surface is. It is respectfully submitted that one of ordinary skill in the art would realize from Duchane as a whole that a solvent would replace diamond turning and produce a smooth surface that would be applicable in certain optical applications.

The fact that Duchane teaches the solvent attack as a viable replacement for diamond point turning would be clear motivation to combine the reference with the admitted prior art. The "diamond knife machining" noted by Duchane (see col. 2, line 53) would be the last grinding step in the admitted prior art. If Duchane suggests that such can be replaced with a solvent attack, then surely that is motivation to do so. Duchane does not have to disclose any other machining steps since the admitted prior art already does this. Is appellant suggesting that Duchane will form the optical article

entirely from solvent polishing? This is very unlikely. As taught in the admitted prior art, coarse grinding precedes fine grinding. It is the fine grinding that Duchane will replace with a solvent attack. Obviousness only requires a reasonable expectation of success. Appellant's comments notwithstanding, it is respectfully submitted that there would indeed be a reasonable expectation of success in combining the admitted prior art and Duchane. Clearly, the admitted prior art and the solvent embodiment of Duchane both work to obtain some degree of surface smoothness on plastic articles. While they may not be suitable for all applications, the instant claims do not recite any particular application—other than optical article—nor any particular smoothness that would not be embraced in the combination as applied. Hence, it is believed that a reasonable expectation of success would be had in the combination. Appellant has provided arguments for many of the dependant claims and these have been addressed in the rejection, supra. Needless to say, it is respectfully submitted that the centrifuging as set forth in instant claims 20-22 would have been obvious over the continuously circulating bath. The solvent vapor is clearly taught in Duchane as noted by appellant at the bottom of page 27 of the brief and this would render instant claims 23-28 obvious. Again, it is reiterated that the instant claims do not set forth any particular surface smoothness. If centrifugation is obvious, then surely the combination of this and a vapor phase attack as set forth in instant claims 29-31 would have been obvious.

In summary, appellant has repeatedly pointed out that Duchane cannot obtain a smooth surface using a solvent alone—ie, a non-solvent is necessary. If that is truly the case, one wonders how the instant invention is able to obtain a smooth surface using a




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solvent alone, for indeed claim 18 is so limited --it uses either a solvent or a mixture of solvents. In truth, one of ordinary skill in this art knows that solvents alone will provide a smooth surface, albeit one that may not be as smooth as the "super-smooth" surface that Duchane obtained using certain solvent and non-solvent combinations. However, the instant claims are totally silent with respect to the degree of smoothness of the instant surface and hence would clearly have been obvious over the combination as applied.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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10/28/07

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